Association Between Mother's Age and Breastfeeding Status in the Northern Iran

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Abstract

Introduction: Breast milk provides the ideal nutrition for infant and it is more easily digested than infant formula. The main aim of this study is to determine breastfeeding status, exclusive breastfeeding, and their relation with mother's age among under-five children in the north of Iran. **Material and Methods:** This was a descriptive, cross-sectional study, which was carried out in 1997 persons (535 = Fars-native, 773 = Turkman and 689 = Sisstani) from 20 villages in the north of Iran. The calculated sample sizes of 1800 respondents at least were needed for a 95% confidence and a maximum marginal error 0.02. Exclusive Breastfeeding Duration (EBFD) and Breastfeeding Duration (BFD) were classified based on WHO definitions. **Results:** BFD is 20.16 months and statistical difference is significant among three ethnic groups (p=0.001). Post hoc test are significant between Fars-native and Turkman (p=0.001), and between Turkman and Sisstani (p=0.002) and between Fars-native and Sisstani (p=0.024). EBFD is 5.77 months and statistical difference is significant among three ethnic groups (p=0.011). Post hoc test is significant between Turkman and Sisstani (p=0.027). As whole, duration of breastfeeding positively increased with mother's age (p=0.002) but statistical association was not significant between exclusive breastfeeding duration and mother's age. **Conclusion:** In rural area in the north of Iran, the EBFD and BFD were 5.74 and 20.16 months, respectively and they were in Turkman group more than in others. Mother's age have a rising role for EBFD and BFD whereas in all of ethnic groups it was not the same.

Key words: Breastfeeding, Ethnicity, Mother's age, Iran

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Introduction

Breast milk provides the ideal nutrition for infant and it is more easily digested than infant formula[1]. Breast milk contains antibodies and lowered the risk of having asthma or allergies and diarrhea[2].

According to the Health and Disease Study in Iran (2000), breastfeeding rate and exclusive breastfeeding rates were established 90% and 45% of children, respectively. Exclusive breastfeeding rate decreased from 44% in 2000 to 27% in 2004[3].

Breastfeeding is well established in Iran, and the history of it can be traced back to the fourth century AH in the Canon Medicine Text book written by Avicenna[4]. Iran is a Muslim country and Islam emphasizes on the importance of breastfeeding[5].

Factors thought to influence the Exclusive Breastfeeding Duration (EBFD) and Breastfeeding Duration (BFD) include; ethnicity, mother's age, mother's job,

parent's educational level, social-economic status, insufficient milk supply, infant health problems, mother's obesity, smoking, parity, method of delivery, maternal interest and other related factors[6].

Of 1,7 million populations in the Golestan province (north of Iran and southeast of Caspian Sea), 586640 person are living in Gorgan and Aq-Qala districts. The proportion of rural residence in two areas is 25.6% and 69.3%, respectively. Agriculture is the main occupation in rural areas and different ethnic groups such as Fars-native, Turkman and Sisstani are living in this region[7].

Due to the restriction in executing epidemiological projects, there was not any study on the association between breastfeeding and maternal age in the north of Iran, up till now; therefore it was necessary to design a research project to determine the breastfeeding status, exclusive breastfeeding, and their relation with mother's age. This idea was implemented in a research investigation which comprehensively studied on the under-five children nutritional status in rural area in the north of Iran.

Material and Methods

This was a descriptive, cross-sectional study, which was carried out on 1997 children (535=Fars-native, 773=Turkman and 689=Sisstani) from 20 villages in the north of Iran in 2013. Villages and children have been chosen by simple sampling. The calculated sample sizes of 1800 respondents at least were needed for a 95% confidence and a maximum marginal error 0.02. For all of cases, a questionnaire with contain questions on the social-demographic condition of families of children same as location area and ethnicity was completed by a learned team.

The ethnic groups were divided into three groups: 1) Fars -native: The natural inhabitant of this province, which they are recognized with same name in the society 2) Turkman: The inter marriage of this ethnic group with other ethnic groups were rare therefore this ethnic group can be recognized as pure race. 3) Sisstani and Bluch ethnic group: This ethnic group were immigrated from Sisstan and Bluchestan province from the east of Iran far earlier. Mother's age has been recorded as quantities and classified by three groups: 1) <25 years, 2) 25-34 years and 3) 35≥ years.

EBFD was classified based on WHO[8] definition. WHO defined exclusive breastfeeding as; "the infant has received only breast milk from his /her mother or a wet nurse, or expressed breast milk, and on other liquids or solids with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines."

SPSS 18.0 software was used for statistical data analysis. Chi-2 test was used for qualities groups and *p*. value under 0.05 included significations. The mothers who did not like to participate in our study, has been excluded.

Results

Nutrition of breastfeeding is 20.16 months and statistical difference is significant among three ethnic groups (p=0.001). Post hoc test are significant between Fars-native and Turkman (p=0.001), and between Turkman and Sisstani (p=0.002) and between Fars-native and Sisstani (p=0.024).

Duration of exclusive breastfeeding is 5.77 months and statistical difference is significant among three ethnic groups.(p=0.011). Post hoc test is significant between Turkman and Sisstani (p=0.027).Table 1.

As whole, duration of breastfeeding positively increased with mother's age (p=0.002) but statistical association was not significant between exclusive breastfeeding duration and mother's age. In Turkman group, duration of breastfeeding significantly increased with mother's age (p=0.012) but it was not significant in other ethnic groups. In spite of duration of breastfeeding was increased in older mothers in Sisstanish group but statistical difference was not significant Table 2.

Pearson's correlation was showed a positive correlation between breastfeeding duration and mother's age (r=0.097, p=0.001).

Discussion

Duration of breastfeeding (DBF) and exclusive breastfeeding duration (EBFD) and their association with mother's age among ethnic groups will be discussed.

In our study, DBF and EBFD were 20.16 months and 5.77 months, respectively. Based on previous study in the north of Iran[9], 57.4% of children were in breastfeed at 18-24 months and it was more in Turkman group. In another study[10] in this area, BFD and EBFD were 20.6 months and 5.59 months, respectively. Average DBF in south-east Asian countries such as Bangladesh,[11] India[12] and Sri Lanka[13] were seen 28.2%, 18.4% and 21.8% of subjects, respectively.

Table1: Distribution of Exclusive Breastfeeding Duration (EBFD) and Breastfeeding Duration (BFD) based on ethnic groups

Ethnic group	EBFD		BFD	
	No	Mean(SD)	No	Mean(SD)
Fars-native	535	5.75 (0.82)	493	19.46 (5.79)
Turkman	773	5.73 (0.86)	562	20.24 (4.90)
Sisstani	689	5.78 (0.83)	493	20.87 (5.43)
Total	1997	5.74 (0.84)	1444	20.16 (5.37)
P-value		P=0.011		P=0.0001

SD= Standard Deviation

Table 2: The comparison of Exclusive Breastfeeding Duration (EBFD) and Breastfeeding Duration (BFD) among ethnic groups based on mother's age.

Ethnic group	Mother's Age (year)	EBFD		BFD	
		no	Mean (CI)	no	Mean (CI)
Fars-native	<25	139	5.63 (5.42-5.85)	87	18.46 (17.09-19.83)
	25-34	323	5.81 (5.71-5.91)	242	19.74 (19.07-20.42)
	≥35	73	5.66 (5.43-5.90)	60	19.30 (17.62-20.98)
Total		535	5.75 (5.65-5.85)	389	19.46 (18.86-20.07)
p-value			0.937		0.277
Turkman	<25	176	5.64 (5.46-5.83)	109	20.21 (19.21-21.11)
	25-34	446	5.66 (5.52-5.72)	328	20.95 (20.41-21.46)
	≥35	151	5.81 (5.69-5.94)	125	21.80 (20.91-22.67)
Total		773	5.73 (5.67-5.79)	562	20.24 (19.89-20.59)
p-value			0.417		0.012
Sisstani	<25	217	5.91 (5.77-6.04)	140	19.55 (18.62-20.47)
	25-34	383	5.78 (5.67-5.89)	285	19.85 (19.21-20.48)
	≥35	89	5.81 (5.63-6.01)	68	20.59 (19.37-21.81)
Total		689	5.78 (5.69-5.88)	493	20.87 (20.20-21.55)
p-value			0.287		0.317
Whole	<25	532	5.75 (5.69-5.84)	336	19.47 (18.86-20.07)
	25-34	1152	5.73 (5.66-5.79)	855	20.24 (19.89-20.59)
	≥35	313	5.78 (5.69-5.88)	253	20.87 (20.20-21.55)
Total		1997	5.74 (5.70-5.79)	1444	20.16 (19.88-20.43)
p-value			0.714		0.002

CI= Confidence Interval

EBFD has being decreased in Iran during recent years in Iran[14]. In Ethiopian northwest children[15], EBFD was seen in 57.1% before 6 months, 37.0% up to 6 months and 5.9% over 6 months. In Brazil[16], EBFD averagely was 89 days.

We found the BFD approximately equal to previous study in this area[10] and in India but it was less than in Bangladesh[11]. Regards to different definition of EBFD, we saw a little promotion compared to previous study[10] and in Brazil in our study[16].

The variation of BFD and EBFD among ethnic groups was seen in our study, so they were more in Turkman ethnic group. Other studies[9,17] in this area, approved the BFD dissimilarity among ethnic groups. Superiority of nutritional status and BFD in Turkman children compare to other ethnic groups in north of Iran has been approved in previous studies[4,18]. Forste[19] and Liu[20] reported the low interest in BF in black women compared to non-black women and Jevitt [21] was seen the BFD in black women less than in white women and Spanish women in USA. Several studies[22,23] approved the influence of immigration on BFD. BFD variation among ethnic groups in present study probably related to differences in health, nutrition and socio-demographic factors that should be studied in a comprehensive survey in future.

In present study we found a positive association between mother's age and BFD while it was not set up in EBFD. The association between mother's age and BFD was not similar in studies. In China[24], mother's age was a risk factor for BFD and EBFD but Thang[25] observed the low BFD in under-25 years aged mothers compared to older. Dos[26] believed that mother's age and good economic status were the protective factors for early weaning. In another study[27] mother's age have not a significant effect on BFD. It seems the role of mother's age on BFD is related to their socio-demographic status. In that way, we found different association between mother's age and BFD in Turkman group compared with the other ethnic groups.

This study is not a longitudinal research and we didn't assessment all of socio-demographic factors that related to breastfeeding. They are our limiting study.

Conclusion

In rural area in the north of Iran, the EBFD and BFD were 5.74 and 20.16 months, respectively and they were in Turkman group more than in others. Mother's age have a rising role for EBFD and BFD whereas in all of ethnic groups it was not the same.

Recommendation

Public health programs that aim to promote breastfeeding should primary focus on the younger mothers. To establish a comprehensive study for determining the substantial factors contributed to early weaning based on ethnic characteristics is necessary in future.

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